

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Lead solderable per MIL-STD-202 method 208 guaranteed
- Polarity: As Marked
- Mounting position: Any

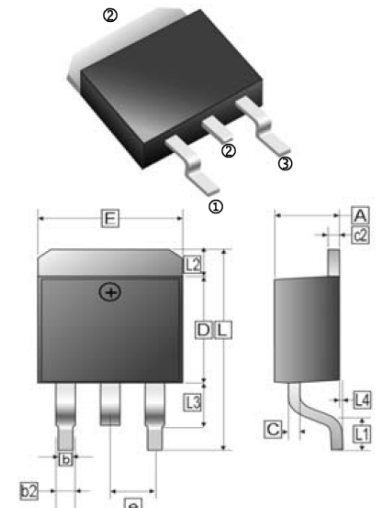
PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-263	0.8K	13 inch

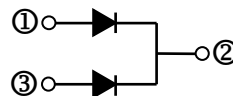
ORDER INFORMATION

Part Number	Type
SM40150D	Lead (Pb)-free
SM40150D-C	Lead (Pb)-free and Halogen-free

TO-263(D²-PACK)



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.00	4.87	c2	1.07	1.65
b	0.51	1.01	b2	1.34	REF
L4	0.00	0.30	D	8.0	9.65
C	0.30	0.74	e	2.54	REF
L3	1.50	REF	L	14.6	16.1
L1	2.5	REF	L2	1.27	REF
E	9.60	10.67			



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, de-rate current by 20%.)

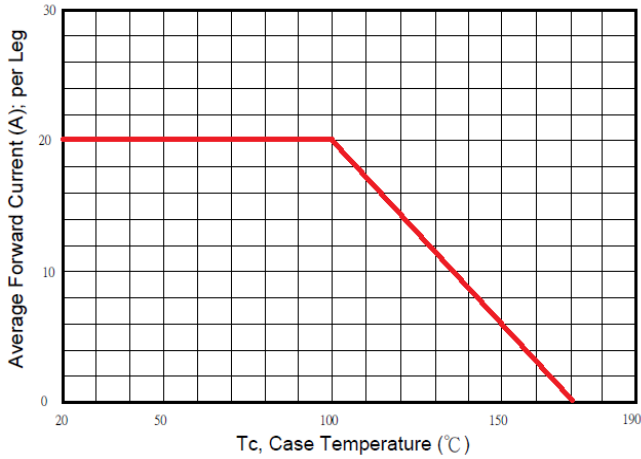
Parameter	Symbol	Rating	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	150	V
Maximum RMS Voltage	V_{RMS}	105	V
Maximum DC Blocking Voltage	V_{DC}	150	V
Maximum Average Forward Rectified Current	Per Leg	20	A
	Per Device	40	
Peak Forward Surge Current @8.3ms single half sine-wave superimposed on rated load	I_{FSM}	300	A
Maximum Instantaneous Forward Voltage @20A Per Leg	$T_A=25^\circ\text{C}$	0.86	V
	$T_A=100^\circ\text{C}$	0.73	
Maximum Reverse Current at Rated VR Per Diode ³	$T_A=25^\circ\text{C}$	0.1	mA
	$T_A=100^\circ\text{C}$	2	
Typical Junction Capacitance ¹	C_J	370	pF
Typical Thermal Resistance from Junction-Case ²	$R_{\theta JC}$	4.3	°C/W
Operating & Storage Temperature Range	T_J, T_{STG}	175, -55~175	°C

Notes:

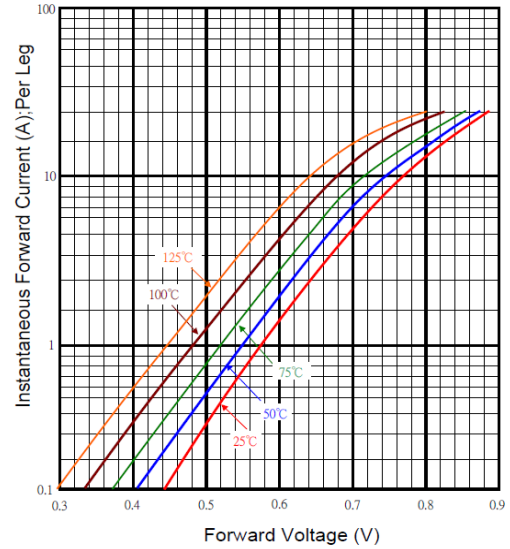
1. Measured at 1MHz and applied reverse voltage of 5V D.C.
2. FR-4 Board Heat sink size: 10*10*0.2mm.
3. Plus test: 300µs Pulse width, 1% duty cycle.

CHARACTERISTIC CURVES

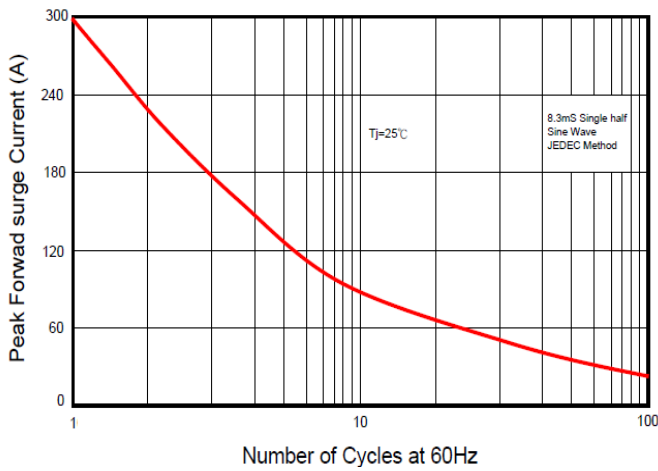
Typical Forward Current Derating Curve



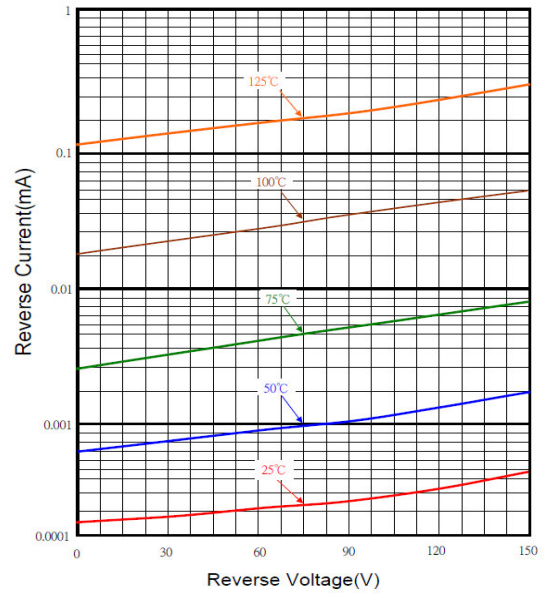
Typical Forward Characteristic



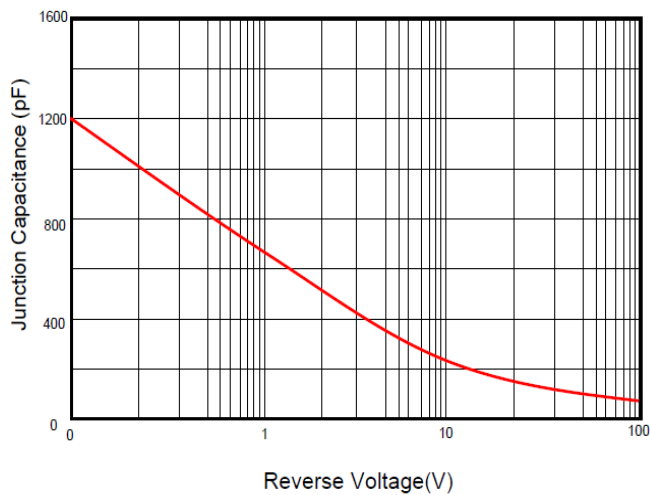
Maximum Non- Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance



Mounting Pad Layout

